

REMARKS

Applicants will limit the remarks to the comments in the response to applicants arguments section of the Examiner's Answer

DIVERGENT INCONSISTENT PROBLEMS ADDRESSED BY APPLIED REFERENCES**Katcher et al.**

The problem addressed in the primary reference Kacher et al in their words is:

“TECHNICAL FIELD

[0002] The present invention relates to cleaning sheets comprising protrusions for removing debris, such as human hair, pet hair, dirt, dust, and the like, from soft surfaces, such as carpeting, upholstery, and the like.”

.....

“[0009] The cleaning sheets of the present invention are especially useful in removing debris and soils that are typically difficult to remove from soft surfaces, such as carpet or upholstery. Pet hair and human hair are particularly difficult to remove from soft surfaces such as carpeting.”

Kacher et al is looking for a disposable product to clean soft fibrous surfaces.

Schortmann et al

The problem being addressed by the secondary reference Schortmann et al is in their words:

“BACKGROUND OF INVENTION

A major problem exists today in the cleaning of modern kitchen/bathroom floors that are covered with the so-called "no-wax" urethane materials. Nearly all these urethane materials are heavily embossed and ordinary cleaning materials and/or applicators do not adequately remove soil from the embossed grooves that are present in the floor covering. Furthermore, the flat surfaces on the floor covering are difficult to clean well enough to restore them to their original lustre. Accordingly, a better cleaning product is needed.”

Schortmann et al is looking for a product to clean hard scratch prone surfaces.

Problem articulated In Examiners Answer

The problem posited in the Examiners answer that is addressed by combining these two teachings is in providing a

"cleaning implement which has both cleaning and scrubbing capabilities due to the protrusions as well as wiping and absorbent properties due to the nonwoven."

DIFFERENT FUNCTIONS OF NONWOVEN AND PROTRUSION ELEMENTS IN REFERENCES

The "protrusions" and "nonwovens" in Kacher et al have very different functions than the "protrusions" and "nonwovens" in Schortmann et al.

The Protrusions

In Katcher et al the protrusions are design to pick up large objects in carpet or the like and as such are preferably hook shaped. These protrusions would also need to be somewhat hard and durable for this function.

"The protrusions of the present cleaning sheets enhance the pick-up of particulate materials, especially animal hair or human hair, from surfaces, especially soft surfaces such as carpeting, upholstery, and the like."(paragraph [52])

In Schortmann et al the protrusions are for scrubbing a scratchable hard surface and are broken cells of a very open celled foam not hook elements or the like as taught by Katcher et al. These foam cell wall protrusions are intended to be soft delicate foam structures.

"The present invention not only can wipe a surface and absorb liquid, but it is designed to scrub a floor clean while entrapping, within the fabric, dirt that is being scrubbed off the floor."(col. 3 line 21-24)

"At this time it should be pointed out that the word "stiff" does not suggest that the fabric is stiff per se, but only that stiffness is a function of the high modulus polymer used in the foam. In fact, the bristles are soft enough to be non-scratching as mentioned in an earlier paragraph." (col. 4 lines 24-29)

The soft foam protrusions of Schortmann et al would not work to pick-up the particulate materials, especially animal hair or human hair, from carpet like surfaces as required by Katcher et al. and the hook projections of Katcher et al. would likely not be the non-scratching soft scrubbing projections that are required by Schortmann et al. There would hardly seem to be motivation or reason to substitute the projections of Schortmann et al. for those of Katcher et al. or vice versa

The Nonwovens

The examiners answer assumes the absorbance is the purpose of the nonwoven material in both references and therefore it would be obvious to use a nonwoven in this new article created in the combination of these two references to obtain a nonwoven absorbent layer.

The nonwoven used in Katcher et al are described as a possible "substrate". The "substrate" could also be a film. There really is not much in the way of functionality or criticality to use of the nonwovens as the support substrate for the hook shaped protrusions. Nonwoven appear to be preferred due to softness as the article is intended to be held in a person's hand. The hook shaped protrusions are used to pick up pet hair etc, which the structure is design to do. This is done on dry fabrics not wet surfaces so absorption is not even a concern with Katcher et al.

The nonwoven in Schortmann et al is there to provide structural integrity to the foam. This is how Schortmann et al describes the state of the nonwoven in its structure:

"SUMMARY

The present invention relates to a nonwoven fabric particularly well suited for use as a floor cleaning fabric. This fabric is a composite comprising a relatively stiff low density reticulated foam inserted between layers of a blend of rayon and polyester nonwoven web, with the

unbonded composite then being entangled by passing it under jets of water, which are under high pressure, creating a structure having stiff protrusions. These protrusions are created when the foam, which is made up of a majority of connecting polymer circles therein, has these circles substantially broken up by the water jets. This breaking up of the polymer circles makes the foam discontinuous and causes it to protrude through the fabric to function as bristles.

An object of this invention is to provide a fabric with protruding bristles to scrub and clean irregular, as well as flat, surface areas.

Another object of this invention is to provide a nonwoven fabric that is capable of absorbing liquids and entrapping dirt in said liquid within the interior of the fabric.

Still another object of this invention is to provide a nonwoven fabric strong enough to take abuse of most cleaning forces without abrading."

Later it is stated

"The jets of water, while entangling the web and foam into an integral composite fabric, also forces the fibers in the web to be more or less compacted down into the foam structure with a part of the foam extending above the surface of the web to eventually act as bristles. This is illustrated in FIGS. 4 and 5 of the nonwoven web. In addition, because the fabric is a composite with the fibers of the nonwoven web being entangled with the foam and compacted down within the foam, the fabric becomes strong enough to take the abuse of cleaning forces without abrading." (col. 5 line 11 on)

The Schortmann et al material is used to clean wet hard surfaces so absorption is a concern however this not one that the nonwoven is primarily provided for. The nonwoven is not there primarily for absorbance as posited in the Reply Brief. In fact the nonwoven gets compacted into the 3 dimensional foam structure as stated repeatedly in Schortmann et al. Absorbance is attributed to the hydrophilic foam (note e.g. col 3 lines 25-28), which is inherently a more absorbent structure than a compressed nonwoven fabric.

THE COMBINATION WOULD BE NONFUNCTIONAL

In Reply brief it is posited:

" the rejection does not state that hydroentangling would not be used instead of any adhesive bonding of the strips in place, but would instead be used to displace the fibers of the nonwoven so as to embed the protrusion containing strands into the nonwoven as taught by Schortmann so that a single face of the implement would have both the protrusions as well as the fibers of the

nonwoven in order to impart dual functionality of scrubbing and wiping/absorbing to a single face of the cleaning implement.”

Numerous problems with this include;

- 1) in Schortmann et al the foam is not taught as embedded into the nonwoven but rather that the fibers of the nonwoven are compacted into the foam. This is the exact opposite proposition than that set forth in the reply brief. In Schortmann et al the foam is not embedded into a nonwoven but rather a nonwoven is embedded into the foam,
- 2) the surface of Schortmann et al is formed by the foam protrusions not the nonwoven which is compacted into the foam,
- 3) the strands of Katcher et al would act like fibers and be displaced just as easily as the fibers of the nonwoven resulting the strands twisting and tangling with the fibers and each other which from the perspective of either Katcher et al or Schortmann et al would be a nonfunctional product.

This last point was dismissed by the as it is viewed that applicants claimed backing element formed of continuous intersecting strands is the same as the discrete strand structures of Katcher et al and therefore the claimed structure would likewise be destroyed by hydroentangling. This is not the point.

This assertion does not address the fundamental issue that regardless one can not combine references in a manner that would lead to a undesirable result. If a proposal for modifying the prior art in an effort to attain the claimed invention causes the art to become inoperable or destroys its intended function, then the requisite motivation to make the modification would not have existed. See *In re Fritch*, 972 F.2d 1260, 1265 n.12, 23 USPQ2d 1780, 1783 n.12 (Fed. Cir. 1992). Note also MPEP section 2143.01 V. “If (a) proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)”

In any event applicants do not claim a nonfunctional result. Applicants claim 1 requires that the projections on the backing element extend out to form a surface of the cleaning sheet composite. Applicants claim a specific structure that can be arrived at by taking an inherently structurally stable netting and hydroentangling it. However this structure could be arrived at by other processes, such as temporarily stabilizing the continuous strands by keeping them under tension when they are being joined to a nonwoven by hydroentangling. The claimed structure is not taught in the art.

In any event Claim 16 requires the strands are joined at the crossover points. This is the disclosed preferred method for providing a structurally stable backing of intersected strands. This is not taught anywhere, which appears to be acknowledged in the Reply Brief

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application is requested.

Respectfully submitted,

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Date

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